United States Environmental Protection Agency
Region 1 - EPA New England
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Boston, MA 02109-3912

Drafted Date: October 24, 2016
Finalized Date: November 25, 2016

Subject: H.J. & A. Howrigan & Sons, Inc. – Inspection Report

From: Lisa Thuot (OEME)

Reviewed by: Andrew Spejewski

To: File

I. Facility Information

A. Facility #1 Name: Ryan Farm
Facility #1 Location: 1012 South Rd., Fairfield, VT 05455

B. Facility #2 Name: Sheldon Farm
Facility #2 Location: 429 Northrop Rd., Fairfield, VT 05483

C. Facility #3 Name: Howrigan Home Farm
Facility #3 Location: 104 Howrigan Rd., East Fairfield, VT 05448

D. Facility #4 Name: HBAR-9 Farm
Facility #4 Location: 87 Boissoneault Rd., Fairfax, VT 05454

E. Farm/Facilities Contacts: Lawrence Howrigan, Owner
Harold Howrigan, Owner
Mike Howrigan, Owner

F. NPDES ID Number: None

II. Background Information

A. Dates and times of Inspection:
Arrive at Facilities: *August* 2, 2016 @ 0903
Exit Facilities: August 2, 2016 @ 1710

B. Weather Conditions: Sunny, approx. 79°F. No rain prior to inspection.

C. US EPA Representative(s): Lisa Thuot, Compliance Inspector (OEME)

D. State Representative(s): Trevor Lewis, VT Agency of Agriculture
Tyler Knapp, VT Agency of Agriculture
Clark Parmelee, VT Agency of Agriculture

E. Federally Enforceable Requirements Covered During Inspection: 40 CFR §122.23

III. Type and Purpose of Inspection

The purpose of the inspection was to assess applicability of the Concentrated Animal Feeding Operation requirements under the Clean Water Act at 40 C.F.R. Part 122.23. The inspection was requested by the EPA Office of Technical Enforcement.

IV. Inspection Information

Entry Procedures:
The inspection was announced to one of the owners, Lawrence Howrigan, by telephone on July 28, 2016. When I arrived at the Ryan Farm I presented my inspector credentials to the three Howrigan brothers and co-owners: Lawrence Howrigan, Harold Howrigan, and Mike Howrigan. I explained the purpose of the inspection and which areas of the farm would be inspected. The Agency of Agriculture representatives explained they would be doing a concurrent compliance inspection. Prior to touring the farms, I disinfected my boots in accordance with EPA Biosecurity procedures.

Background:
The Howrigans own four independently operating farm facilities in Vermont: Ryan Farm in Fairfield, Sheldon Farm in Sheldon, HBAR-9 Farm in Fairfax, and Howrigan Home Farm in Fairfield. The farms each have a medium farm operations (MFO) permit through the Agency of Agriculture. The Howrigans also own and operate a heifer facility at 815 Buck Hollow Road in Fairfield, which is associated with the Home Farm for purposes of land application and nutrient management.

Facility #1: Ryan Farm – 1012 South Road, Fairfield, VT

- Ryan Farm is a dairy operation which has 290 milking and dry cows and 100 heifers.
- There is one manure pit on-site that receives manure and milkhouse wastewater. Some milkhouse wastewater is recycled for cleaning purposes.
- Total acreage is 450 acres of rented and owned land, which includes approximately 200-250 tillable acres for manure land application. Ryan Farm has about 100 acres designated for grazing.
- Manure land application is typically done by Howrigan employees. On occasion some land application is done by a contractor. The farm does not import or export manure.
- Most animal mortalities are sent to an off-site rendering facility. Some dead calves are composted on-site.
- The farm has an updated 2016 nutrient management plan (NMP) which was prepared by Bourdeau Brothers of Middlebury, VT. Soil testing was done on August 2015 within

schedule. The Agency of Agriculture representatives determined that the NMP was missing a spreadsheet of phosphorous (P) index calculations. Two crop fields near waterways were selected by the Agency of Agriculture to check for vegetated buffers required by their MFO permit.

- The nearest waterway is an unnamed (riverine wetland) stream just south of the farm production area. The unnamed stream flows west and discharges into the Fairfield River, located approximately 0.28 miles west of the farm production area.

Ryan Farm Tour:

- Ryan farm has a leachate collection system at the silage bunkers that was designed by NRCS and installed with EQIP funds. The system collects/directs low-flow runoff into a tank and to the manure pit, and high-flow runoff into a vegetated treatment area (VTA). The intake screen to the leachate system was clean/no build-up of solids. We inspected a drainage ditch behind the silage bunkers, but did not observe any leaks from the bunkers into the ditch.
- At the concrete heifer barnyard, animal waste/manure was flowing from a break in the barnyard wall into the silage collection system high-flow VTA (photos #1-3). Some liquid animal wastewas pooling behind solids sitting on the edge of the VTA. Lawrence Howrigan said the heifer barnyard is periodically cleaned with a skid steer.
- The farm's manure pit is clay-lined and had sufficient capacity and freeboard at the time of inspection. There is a clean water diversion pipe under the main barn to capture clean water runoff and divert it away from the manure pit.
- The Agency of Agriculture team checked fields # SHE-03 and #H5. Field #SHE-03 had an approximate 27.5 ft. buffer with the top of the stream bank at one location, and less than their required 25 ft. in another location. Field #H5 had a 24.10 ft. and 15.10 ft. buffers in two locations, with the majority of the buffer greater than or equal to 25 ft.

Facility #2: Sheldon Farm – 429 Northrup Road, Sheldon, VT

- Sheldon Farm was acquired by the Howrigan family in 1968. The farm has 275-280 mature dairy cows. There are no heifers or calves at the farm.
- The farm has one manure pit on-site that receives manure and milkhouse wastewater. There are 2 freestall barns on the property, 4 silage bunkers, and no barnyards.
- The farm has about 300 acres owned by the Howrigans, and 130-140 rented acres. There are also approximately 80-100 acres of pasture.
- Sheldon farm also has a silage leachate collection system in place, designed by the Howrigans and approved by Rob Achilles at the VT Agency of Agriculture.
- The farm has an updated 2016 nutrient management plan (NMP) which was prepared by Bourdeau Brothers of Middlebury, VT. The Agency of Agriculture representatives selected two crop fields from the NMP for field buffer checks.
- The nearest waterway is an unnamed (riverine wetland) stream that flow through the north side of the farm production area. The unnamed stream discharges into Black Creek, located approximately 0.4 miles west of the farm production area.

Sheldon Farm Tour:

- Sheldon Farm has a low-flow/high-flow leachate collection system for their silage bunkers. The silage area is graded toward the collection system with a concrete pad and elevated lip at the top of the driveway for containment (photo #4). We observed a minor amount of solids off the concrete pad on the driveway. Some leachate was pooling on the back side of the silage piles off the concrete pad (photo #5), which is bordered by vegetation; we did not see a discharge from this area.
- There was a small amount of woody vegetation on the banks of the manure pit. Harold Howrigan said they recently removed some woody vegetation, and will remove this growth also.
- Below the manure pit, high flow from the silage collection system daylights in an open dirt lot (photo #6). The Howrigans explained the lot was previously a drainage ditch, which they decided to eliminate and fill with dirt. The dirt lot drains into a grassy, vegetated area with some evidence of flow channelization toward the nearby wetland stream noted above. The stream was dry during the inspection. We observed an elevated berm between the vegetated, grassy area and the stream. Trevor Lewis said this area would be a low risk for water quality concerns.
- The farm has a long concrete walkway for milking cows (photo #7). The Howrigans said the walkway is periodically scraped of manure. We observed a broken section of concrete on the walkway curbing which required repair, where manure was flowing off the walkway into a low area (photo #8).
- The Agency of Agriculture team checked field # SF04, which had a 25 ft. buffer with Black Creek. A second field check revealed a buffer of about 18 ft., less than the 25 ft. required by the Agency of Agriculture.

Facility #3: Howrigan Home Farm – 104 Howrigan Road, Fairfield, VT

- The Home Farm is the original property owned by the Howrigan family. There are 295 milking and dry cows at this location. The farm has one manure pit, one barn, and one silage bunker. There are no barnyards.
- Land associated with the Home Farm includes about 412 tillable acres (170 acres of which are rented) for land application, and 200 acres of pasture.
- A heifer facility located at 815 Buck Hollow Road in Fairfield is affiliated with the Home Farm and houses 130 heifers. The heifer facility has a manure pit. Land application and nutrient management is done in accordance with the Home Farm NMP, according to Lawrence Howrigan.
- The nearest waterways are two unnamed (riverine wetland) streams located just north and west of the farm. The unnamed streams flow north to the Fairfield River, located 0.6 miles west of the farm production area.

Home Farm Tour:

- The Home Farm has a silage leachate collection system which the owners designed. Silage bunkers slope to a low area, where runoff flows through a pipe into a storage pond that was formerly used as a manure pit (photo #9). New curbing was added on the north

side of the silage pad to deter runoff from entering an adjacent ditch that flows into one of the nearby unnamed streams to the Fairfield River.
- The farm's manure pit had sufficient capacity/freeboard.
- Sawdust bedding is stored covered in an open-bay storage shed.
- Two crop fields were checked by the Agency of Agriculture for buffers with adjacent waterways. The first crop field had an acceptable buffer of 27 feet. The second crop field ('MCN#4') was approximately 19 feet, less than the 25 feet required in their MFO permit.

Heifer Facility Tour - 815 Buck Hollow Rd., Fairfield, VT:

- Manure is gravity fed from the barn to the on-site manure pit.
- The feed consists of all haylage, and stored in bunkers. No corn silage is stored at this facility. Runoff from the haylage bunkers on the north side of Buck Hollow Road flows into an adjacent vegetated area. The haylage bunker on the south side of Buck hollow Road flows into a grassy field. No discharges were observed from these areas.
- The facility has one open lot for fence training of heifers.

Facility #4: HBAR-9 Farm – 87 Boissoneault Road, Fairfax, VT

- The HBAR-9 Farm, formerly known as Fairfax Farm, was acquired by the Howrigans about 1 year ago. They maintain 312 milking and dry cows at this farm.
- HBAR-9 Farm has one manure pit and one barn. There are no pasture areas or exercise lots. Milkhouse wastewater is recycled for cleaning and/or sent to the manure pit.
- The farm encompasses about 570 acres, of which 280 are owned and 290 are rented.
- Large animal mortalities are sent to an off-site rendering facility, and they have a compost pile for calves.
- HBAR-9 Farm has a NMP prepared by Bourdeau Brothers of Middlebury VT. The farm exports about 150,000 gallons of manure annually to a neighboring property.
- The nearest waterways are unnamed (riverine wetland) streams located just east and west of the farm production area. The unnamed streams flow into Mill Brook, located 0.1 miles west of the farm production area. Mill Brook is a tributary to the Lamoille River.

HBAR-9 Farm Tour:

- The farm has 1 main barn with roof drains for clean water diversion, which flows through a PVC pipe into a low area where it settles on grass.
- HBAR-9 Farm does not have a silage leachate collection system. There is a storm drain near the haylage and corn silage bunkers which discharges into a vegetated swale that flows east toward Mill Brook. The swale smelled like silage for a distance of approximately 20-30 feet away from the storm drain outlet. Beyond this point, we did not observe any running water in the swale; only damp soils. Trevor Lewis suggested a future best management practice (BMP) be designed for the silage area to capture and direct low-flow runoff into the manure pit, and high-flow runoff into a vegetated treatment area.
- The two crops fields checked for buffers with adjacent waterways were greater than the 25 feet required by the Agency of Agriculture's MFO permit.

V. Exit Briefing

An exit briefing was conducted by myself and Agency of Agriculture representatives with Lawrence Howrigan, to discuss the following:

- At Ryan Farm, we observed evidence of animal waste flowing from the concrete heifer barnyard into the silage collection system high-flow vegetated treatment area.
- The Ryan Farm NMP was missing a spreadsheet of phosphorous (P) index calculations.
- At Sheldon Farm, we observed some silage leachate pooled on the back side of the silage piles off the concrete pad. The area is bordered by vegetation and we did not observe discharge.
- At Sheldon Farm, high-flow runoff from the silage collection system daylights in an open dirt lot, which was previously a drainage ditch, then flows into a grassy area. We observed an elevated berm between the grassy area and the nearby unnamed stream.
- The concrete walkway at Sheldon Farm had a break in the concrete curbing where manure was leaking off the walkway, which required repair.
- At HBAR-9 Farm, a storm drain near the haylage and corn silage bunkers discharges into a vegetated swale that flows east to Mill Brook. The swale smelled like silage for a distance of approximately 20-30 feet away from the storm drain outlet, beyond which we did not observe flowing water (damp soils only). Trevor Lewis suggested a future BMP such as a leachate collection system for these silage bunkers.

End of Report

Report Attachments**:**
Inspection photos
Aerial maps